Amendments to the Specification

Please replace paragraphs [0028]; [0043]; [0048]; [0054]; and, [0065] with the following replacement paragraphs:

[0028] For example, base beverage type can include coffee or tea, size can include small/medium/large/x-large, and modifiers can include cappuccino and latte. As one of skill in the art can appreciate, there are a multitude of different combinations of beverage base types, sizes and modifiers for which a different volume of concentrated flavouring is required. The suitable amount of concentrated flavouring is optimized for every combination to satisfy customers. [[.]] Nozzle cap 106 extends from the cabinet to visually cue the operator or customer of the proper position for placement of a container. As will be shown later, nozzle cap 106 includes a plurality of individual channels in a close-packed configuration for dispensing a corresponding fluid. Ideally, nozzle cap 106 is no larger than the mouth of a typical mug to ensure that the mug is correctly placed to receive fluid from any of the nozzle cap channels. Further details of nozzle cap 106 are shown in Figure 4. As will be described later, user interface 110 and display 114 can be used to re-program dispensing volumes. Those of skill in the art will appreciate that dispensing machines can be configured to have any number of category of variables, and any number of choices within each category of variables.

[0043] Stepper motor 214 is a commercially available product having a face that mates with guide tube flange ~~214~~ 212. Those of skill in the art will understand that stepper motor 214 includes a stator and a rotor that engages rotates a threaded drive rod 222 (shown in Figure 7) in a worm gear relationship to translate rotational movement of the rotor into linear motion of the threaded drive rod 222. Therefore, the threaded drive rod 222 is advanced or withdrawn depending on the clockwise or counter-clockwise rotation of the rotor. Stepper motor operation is well known to persons of skill in the art. Generally, the stepper motor rotates by predetermined step sizes in response to electrical input signals. Hence, the travel distance of a drive rod having a known thread pattern can easily be determined and controlled.

[0048] As previously mentioned, the displacement pump ~~116~~ 222 according to the embodiment of the present invention can dispense high centepoise value fluids at small,

discrete volumes. However, the viscosity of such fluids presents a significant load to any drive means for moving the piston 220. Furthermore, the use of a wide contact edge piston seal 224 adds a further frictional load to the drive means. The drive means, consisting of the stepper motor 214 and threaded drive rod 222, provides sufficient power to overcome the loading presented by both the high centepoise fluid and the friction between the piston seal and the cylinder tube chamber 206. Those of skill in the art will understand that for the threaded drive rod 222 to move, it must not rotate such that rotational movement of stepper motor 214 translates into linear motion of the threaded drive rod 222.

[0054] Figure 9 is a block diagram representing the functional components of dispensing machine 100 shown in Figures 1 to 3. In addition to the already described components of dispensing machine 100, Figure 9 shows the electronic systems that control them. ~~Accordingly, the functional components of Figure 9 that correspond to the components shown in the preceding figures are numbered the same.~~ Dispensing system 300 includes user interface 110, microprocessor 304, pump driver 306, relay system 308, displacement pumps 310, 5 volt power supply 312 and 24 volt power supply 314.

[0065] The pump driver sub-routine shown in Figure 11 is now discussed with reference to the primary control routine previously described in Figure 10. The pump driver sub-routine begins at step 500 when power supply 314 is turned on. This power up initialization step occurs at the same time as the power supply 312 is turned on in step 400 of Figure 10. All the displacement pumps 310 are immediately “homed” in following step 502, where the home position is set to be the fully withdrawn position of piston 220. It is noted that a sensor 240 can be fixed at a position behind stepper motor 214 to detect when the end of threaded drive rod 222 reaches a position corresponding to piston 220 reaching the fully withdrawn position. This feature effectively re-calibrates the stepper motor 214 in the event that one or more threads on threaded drive rod 222 is skipped as it is being advanced or withdrawn. Many types of sensors, such as electro-mechanical and optical sensors, are known in the art that can be used for this purpose.